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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,405	02/27/2004	Heon-Do Yun	8734.286	4520
30827 7590 11/06/2007 MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006			EXAMINER CHIENT, LUCY P	
			ART UNIT 2871	PAPER NUMBER
			MAIL DATE 11/06/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/787,405

Applicant(s)

YUN ET AL.

Examiner

Lucy P. Chien

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 8/28/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2,3,8-16,18,20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) 8-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,3,18,20 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 2,3,18,20,21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Akahira (US 6471352) and of Ueno (JP 09-166783) in view of Ben-Zur (US 20050179708).

Akahira discloses (figure 27C) providing a substrate having a plurality of unit panels formed thereon, loading the substrate onto a stage (Fig. 1, 52) and forming an alignment layer on the substrate to have a uniform thickness selectively dropping ink onto a first one of the unit panel regions by a dropping unit (Figure 1, items 55 and Figure 3, nozzles 108), having a plurality at least one head each head having a plurality of holes (Figure 27D). Wherein the selective dropping of the alignment material onto the substrate.

Akahira does not disclose dropping alignment material. Nor does Akahira disclose the specific movement of the alignment material dropping unit.

Examiner is using Ueno as a reference to disclose that using the dropping unit panels can be used for dropping alignment material. (Abstract)

Examiner is using Ben-Zur to disclose the specific movement of the dropping unit.

Ben-Zur discloses positioning dropping unit at a first side of the stage ([0047]) driving the alignment material dropping unit from the first side to a second side (x axis) of the stage to drop the alignment material through holes along a plurality of first dropping paths along a first dropping directions shifting (y axis) the alignment material dropping unit by a predetermined distance along a direction substantially perpendicular to the first dropping direction driving the alignment material dropping unit from the second side to the first side of the stage to drop the alignment material through holes along a plurality of second dropping paths wherein the second dropping paths are disposed between first dropping paths. The shift distance of the alignment material dropping unit is smaller than a distance between the holes (as shown in Figure 6a-6d)(description of these figures are on page 3, [0046]). And such that the second dropping path (Fig. 6B) are disposed in a region at a separation distance from the first dropping path (Fig. 6A) between the first dropping path, whereby the alignment materials in the first and second dropping paths are spread after dropping to contact eachother. (Fig. 6D). ( Akahira's Ink being being dropped that close together would contact eachother and spread after dropping)

It would have been obvious to one of ordinary skilled in the art to modify Akahira's method of forming color film using a plurality of unit panels to include Ueno's method of forming an alignment film that uses a plurality of unit panels to prevent a decrease in the display performance by providing a uniform orienting film (Abstract). Also, to include Ben-Zur et al's dropping unit movement motivated by the desire to provide a more efficient way of dropping material on a substrate [0005].

***Response to Arguments***

Applicant's arguments filed 8/28/2007 have been fully considered but they are not persuasive.

Applicant's arguments that the prior arts do not disclose wherein the shift distance of the alignment material dropping unit is smaller than a distance between the holes is not persuasive. Please see rejection above. Akahira discloses the shift distance of the alignment material dropping unit is smaller than a distance between the holes (as shown in Figure 6a-6d)(description of these figures are on page 3, [0046]).

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy P. Chien whose telephone number is 571-272-8579. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571)272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lucy P Chien  
Examiner  
Art Unit 2871

  
ANDREW SCHECHTER  
PRIMARY EXAMINER